

# CHANNEL ESTIMATION IN A FACSIMILE MODEM AND METHOD THEREFOR

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## ABSTRACT

A facsimile modem transmitter (40) uses pre-fax control signals, such as an answer tone or an FSK (frequency shift keying) modulation signal, to determine a channel spectral shape of the transmission media (14) before transmitting the fax data. The transmitter (40) determines average energy values of the pre-fax signals as a function of frequencies to determine the channel spectral shape. Using the channel spectral shape information, an appropriate transmission shaping filter (64, 66, 68) is chosen for use by the transmitter (40). This achieves better transmit and receive performance by compensating for roll-off on the transmission media (14), or channel, without the need to use specific training signals.